above amendments. Entired this amendment and early examination are respectfully solicited.

Respectfully submitted,

**SEUNG-HO OH** 

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(Date)

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calculated by said WMC-unit and the similarities of the matched scanning columns stored in said S-buffer.

- 3. The apparatus according to Claim 1—or 2; characterized in that said strip-processing unit comprises a plurality of S-units connected in parallel with each other, and brightness data of the matched scanning columns less than the number of said S-units can be inputted to a first S-unit and sequentially shifted to the next S-unit up to the last S-unit, and wherein said S-units calculate the similarity of each matched scanning column with respect to the reference column using differential brightness of pixels.
- 4. The apparatus according to Claim 3, characterized in that said first S-unit comprises:
- a serial/parallel converter for converting serial brightness data of pixels on the matched scanning column into parallel data output to the next S-unit;
- a differential-brightness processing unit for obtaining differential brightness of pixels between the matched scanning column and the reference column;
- a comparator for comparing the differential brightness of pixels obtained by said differential-brightness processing unit to a threshold value;
  - an adder for accumulating outputs of pixels from said comparator; and a D-flip-flop for buffering outputs from said adder into said S-buffer.
- 5. The apparatus according to Claim 3, characterized in that each of said S-units other than said first S-unit comprises:
- a parallel/serial converter for converting parallel brightness data of pixels of the matched scanning column into serial data output to the next S-unit;
- a differential-brightness processing unit for obtaining differential brightness of pixels between the matched scanning column and the reference column;
- a comparator for comparing the differential brightness of pixels obtained by said differential-brightness processing unit to a threshold value;